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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/675,704	09/29/2000	Nagabhushana T. Sindhushayana	PA000419	3513

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Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
San Diego, CA 92121-1714

EXAMINER

ABRAHAM, ESAW T

ART UNIT	PAPER NUMBER
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2133

DATE MAILED: 12/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/675,704

Applicant(s)

SINDHUSHAYANA ET AL.

Examiner

Esaw T Abraham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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Final rejection

1. Claims **1 to 39** are remained and presented for examination.

*****The response in office action paper number 7 stands active (alive).

*****The objection made to claims 5, 9, 18, 22, 31 and 35 is withdrawn.

Response to the applicant's argument

2. Applicants argument with respect to original claims (1-39) filed on 10/10/03 have been fully considered but are not persuasive. The examiner would like to point out that this action is made final (MPEP 706.07a).

The applicant argues that the references teach the use of fast “relatively short-term” SNR estimates. In response to the applicant’s argument that the references fail to show certain features the applicant’s invention, it is noted that the features upon which applicants rely are not recited in the rejection claim(s). Although the claims are interpreted in light of the specification, limitation from the specification is not read into the claims. See *in re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). For example, terms such as “(fast and short-term) or (slow and long-term)” estimates of SNR are not recited or has nothing to do with the claim languages of claims 1, 14 and 27. Therefore, the argument has been considered but found not convincing

The applicant argues that the references do not include in his teaching “estimating a quality metric of a segment of a received signal”. However, Schulist teach that the turbo decoder could utilize the SNR estimates generated by the SNR estimator to decode a received signal and alternatively the turbo decoder can average the value of “fast” short-term SNR estimates to produce a long-term average SNR value as described (see col. 4, lines 30-67) and further the inclusion of the term “segment” in the claims does not change the concept of the claimed

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invention such that it is allowable over the prior art of record. This is so because a segment is a known to be a self-contained portion of a computer program existed in a computer memory or storage and executed without the entire computer program maintained in internal storage at any one time. Therefore, the argument is moot.

The applicant further argues that Wang initiates decoding of a frame and checks parity before delimitation take place or decoding precedes delimiting which precedes termination and Wang teaches decoding without regard to interval. However, The argument is not convincing since figure 4, step 407 teaches determining the threshold then precedes to step 404 to terminate decoding and step 408 teaches iterative decoding is to be terminated upon the detection of BER (quality metric) abnormality and steps 409 (see col. 7, lines 57-65 and col. 8, lines 24-44).

The applicant argues that Wang perceived an implied risk in using quality SNR as a quality metric and BER may not be decrease with the SNR of the input. Irrespective of how the term "quality metric" understood subjectively, the term "quality metric" is understood by the examiner as quantitative measure of a degree to which software possesses a given attribute affects its quality and Wang in general describe the process of an iterative decoder performing numbers of iterations, for example satisfying the BER when SNR is low (see col. 2, lines 38-56). Therefore, the applicants' argument although acknowledged, has not been found to be convincing and in light of the above, the final rejection holds strong in view of the recited references.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 1-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art Schulist et al. (U.S. PN: 6,542,58) in view of Wang (U.S. PN: 6,526,531).

The examiner disagrees with the applicant and maintains all rejection with respect to original claims 1-39. All the arguments have been considered. It is the examiner's conclusion that the original claims 1-39 are not patentably distinct or non-obvious over the prior art of record (see paper 7).

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

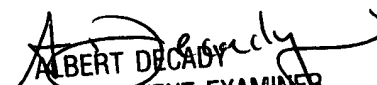
5. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Esaw Abraham whose telephone number is (703) 305-7743. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are successful, the examiner's supervisor, Albert DeCady can be reached on (703) 305-9595. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.


Esaw Abraham

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ALBERT DECADY
SUPERVISORY PATENT EXAMINER
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